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U. S. Dept. of Agriculture
Federal Extension Service
Washington 25, D. C.

"Local Laramie" Follow-Up Talks
3d Day--Graphics

TYPES OF GRAPHICS
(How To Present Your Facts and Figures Graphically)

(Narrative to go with slide set)

(Most of the material prepared by Graphics Institute, 247 W. 46th St., New York 36)

Visualizing Statistical Facts

1. Graphic technique is old one in agriculture.
2. There are three basic techniques--bar, pie, line.
- 3, 4, 5. Many solutions. What's most effective presentation?
6. Answer: The most pictorial.
7. What are elements of pictorial chart?
Quantitative symbol--coins measure quantities.
Sign post symbol--check out counter--tells what coins are about.
8. Another example.
9. Sometimes you will have to sacrifice one of the elements. Here many years have to be covered. We retained sign post symbol and gave up the quantitative.
10. Quantity symbols omitted because variations are not great.
11. No slide.
12. Do people like and understand a pictorial chart better than tables or non-pictorial charts? The Borden Company tested their employees for this chart against 5 non-pictorial charts and tables. The company reported the following results:

A pie-chart, using illustrative symbols, was found to be the most successful, drawing 71 percent correct answers.

As a result of this survey, it is recommended that pictographic pie charts to be used in presenting figure facts to employees.

However, as you will see later, the pie chart is not suited to every use.

13. Are all pictorial charts effective? No--not if you put too much in them. Try to tell one idea at a time--this chart tells too much. When you have a message, try to tell it clearly, simply.

- 14, 15, 15A. Humanize and simplify your captions.
16. Now let's look at some more advanced types of chart technique. Here's one with a central axis. It's designed this way to give easier comparison on both sides of the center line at the same time. That's why it does not line up at left hand side as most charts do.
17. Here's a good use of the pie chart--dividing a 100 percent quantity into large segments. Note how it uses pictorial sign post symbols.
18. Here's another pie chart which dramatically emphasizes the smallest segment with a pictorial sign post symbol.
19. This money flow chart comes from the U. S. Government's annual budget presentation. Its method of showing where the revenues come from and how they are spent is adaptable to many uses.
20. A pictorial map like this has alternate uses, too.
21. Take a careful look at this presentation of marriage and divorce rates on a conventional arithmetic scale. Note how much more impressive the marriage rate is than the divorce rate.
22. Here these same figures are charted on a semi-log scale. Note how much more impressive is the rise in the divorce line. This is because the semi-log chart measures rate of change from a previous period. It emphasizes the fact that the divorce rate rose much faster than the marriage rate. By 1947 the divorce rate had increased 800 percent over 1887. During the same time the marriage rate increased only 100 percent.
23. This chart uses the scale break technique--as you can see in the tears near the base of the cigarette, candy, and beverages bars. These tears indicate that part of the height of the bars has been cut out. If that had not been done, the coffee and ice cream bars would have been so small by comparison that you would not have been able to notice any change between 1950 and 1953. (Use pointer.)
24. This chart uses a distortion technique to counteract the fact that one out of 10--though impressive verbally--is not impressive visually. This chart substitutes action by 10 out of 100 which is impressive visually.

Visualizing Non-Statistical Facts

25. This picture story, from a health plan booklet, illustrates several principles.
1. Establish a dominant pictorial characterization.
 2. Follow it through consistently.
 3. Use a light touch where possible. You might adopt this booklet for farmers to show that the sicker his livestock or crops get, the poorer he gets.

- 26, or 26A. This illustrates principle 4--get as much action as you can into your graphic. Note the dynamic effect of the fuse burning down on the powder keg.
27. Here's a visual diagram which presents statistics in short captions within the chart.
28. This next page from the same article puts the captions outside the chart area because of their length.
29. This Borden sequence story illustrates the need to organize sequences with the use of numbers and clear separation lines between panels.
30. Note how the rest of the story ends with the use of the well-known Borden symbol of Elsie the Cow.
31. This is a common type of graphic story--arranging a number of facts about a subject in a pictorial layout. Note the use of the same character in full black in each panel, tying the layout together.
32. Here's a pictorial diagram with numbers helping to organize the captions around the layout.
33. This chart and the next one illustrate how valuable a 2nd color can be. Note how the color highlights the transmission area.
34. See how much less vivid this chart is without the use of color.
35. From an army report comes this example of a flow diagram. Note how the arrows are used to emphasize direction.
36. Here is another example of a flow diagram with color and direction indicating flow.
37. This organization chart of the U.N. provided proof of the popularity of pictorial presentation. Printed and revised 3 times for the N. Y. Times, it has also been reproduced in many textbooks and distributed overseas by the U. S. Government.
38. This organization chart of the French government illustrates the principle of including short but comprehensive captions to help make organization charts more meaningful.
39. (Disorganization chart from history book.) This is a disorganization chart that shows how a number of facts which do not have a functional or chronological relationship can still be organized in a meaningful pattern.
40. The cover of this Studebaker booklet illustrates the principle of establishing identifiable characters on the cover and carrying all the way through the booklet.

41. This opening spread from the Studebaker booklet shows the principle of letting the reader know right at beginning what's in it for him--in a colorful way.
42. Typical pages from the booklet illustrate the principle of trying to tell a great deal of the story in chapter headings and illustrations so that a reader who reads no more than this will still get highlights of the story.
43. Back cover shows the need to finish a booklet with a quick, clear, graphic summary.

Eight Guides to a Good Graphic

1. Anything which contains quantitative or factual material can be graphically presented.
2. Analyze your material for--and from--the graphics angle.
3. Get clear in your own mind what you want to say.
4. Try to be as pictorial as possible.
5. Humanize and simplify your captions (who, what, when, where, why, even how).
6. Try several ways in first rough sketches.
7. Test your rough by covering captions.
8. Test your rough on a test audience.

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